DYNAMAC CORPORATION
Environmental Services

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September 25, 1991

Ms. Cheryl Smith
U.S. EPA Region IV
Superfund Branch
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Work Assignment No. C04054 - Olin Corporation, McIntosh Site - Review of Revised Sampling Plan, Macroinvertebrate Study and Fish Sampling, September, 1991
Document Control No. C04054-OC-DF-001

Dear Cheryl:

Enclosed are two copies of a letter report presenting PRC's comments on the review of the Revised Sampling Plan, Macroinvertebrate Study and Fish Sampling, September, 1991, for the Olin Corporation Site, McIntosh, Alabama.

If you have any questions or comments, do not hesitate to contact Jack Sulima or me at (404) 681-0933.

Sincerely,

DYNAMAC CORPORATION

David L. Rusher
Regional Manager

DLR/jar

Enclosures

cc: Ken Meyer, EPA Regional IV Project Officer (w/o encl.)
Steve Kale, Dynamac TES Program Manager
Jack Sulima, Dynamac Work Assignment Manager
TES WA File

PRC Environmental Management, Inc.
260 Peachtree Street
Suite 950
Atlanta, GA 30303

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PRC

September 24, 1991

Mr. Jack Sulima
Dynamac Corporation
230 Peachtree Street, N.W.
Suite 500
Atlanta, Georgia 30303

Re: U.S. EPA Contract 68-W9-0005
TES VIII Work Assignment No. C04054
Olin Chemical Site, McIntosh, Alabama
Technical Review of the Revised Sampling and Analysis Plan,
Macroinvertebrate Study and Fish Sampling, September 1991

Dear Mr. Sulima:

PRC Environmental Management, Inc. (PRC) has reviewed the revised sampling and analysis plan prepared by Woodward-Clyde Consultants. This letter presents PRC's comments on the report and is provided to you for submittal to the U.S. Environmental Protection Agency (EPA) Region IV. PRC was not able to meet the original September 23, 1991 deadline due to internal quality assurance and quality control requirements. The EPA WAM, Ms. Cheryl Smith, was apprised of this matter earlier today.

The following reference documents were used during the review:

- Lind, O. T., 1979, Handbook of Common Methods in Limnology, Second Edition. The C. V. Mosby Company.
- U.S. Environmental Protection Agency, 1989a, Risk Assessment Guidance for Superfund, Volume II, Environmental Evaluation Manual. EPA 540/1-89/001, Office of Emergency and Remedial Response, Washington, D.C.
- U.S. Environmental Protection Agency, 1989b, Ecological Assessment of Hazardous Waste Sites: A Field and Laboratory Reference. EPA 600/3-89/013, Environmental Research Laboratory, Corvallis, Oregon.

GENERAL COMMENTS

1. The report states that Operable Unit 2 consists of the 65-acre basin, the wetlands within the Olin property boundary and the wastewater ditch, consisting of two channels. However, the biological sampling is limited to the basin and the northern channel of the wastewater ditch. The sampling area should be expanded to include the wetlands area, the southern channel of the wastewater ditch, and the basin discharge channel that flows to the Tombigbee River.

2. The biological sampling plan should include collecting data on environmental conditions at the time of the study. These data should include:

- Water Quality Parameters: hardness, pH, dissolved oxygen, temperature, presence or absence of thermocline, color, dissolved organic carbon, conductivity, and total suspended solids

- Hydrologic Characteristics: flow rate, depth, stream velocity, and surface water inputs and outflow

- Sediment Parameters: grain size distribution, permeability and porosity, bulk density, organic carbon content, pH, color, and benthic oxygen conditions

3. The sampling plan does not consider the temporal variability of the biological communities being sampled. Seasonal changes, such as life cycles of the organisms, and temperature and water level fluctuations will affect the sampling results. A two-phased sampling approach should be considered to account for these seasonal changes.

4. The sampling plan does not identify a control or reference site to be used for comparison purposes has not been identified in the sampling plan. A reference site as similar as possible to Operable Unit 2 should be identified and sampled according to the protocols established for Operable Unit 2.

5. The professional qualifications of the individuals conducting the macroinvertebrate study and fish sampling should be identified. Appropriate qualifications will be particularly critical in the taxonomic categorizations of the macroinvertebrates.

SPECIFIC COMMENTS

1. Page 4, Section 3.1. The report states that any impacts will be calculated by comparing relative abundance and indices of community composition along gradients of contaminant concentrations across comparable substrates. The particular "indices of community composition" to be used in the study must be identified and indices for evenness, diversity, and similarity should be proposed. Also the term "comparable substrates" should be defined.

2. Page 4, Section 3.2. The report should identify the selected organic contaminants to be analyzed for prior to approval of the sampling plan. If these selected contaminants are compounds that rapidly metabolize and do not bioaccumulate, indirect measures (biochemical endpoints, such as cholinesterases) may be more appropriate than tissue analyses.

   Because mercury tends to undergo methylation, thereby becoming relatively lipophilic, fatty tissues such as subcutaneous fat, kidney fat, or brain tissue should be analyzed.

3. Page 9, Section 5.1.1. The second sentence should state the sieve mesh size as 0.25 mm instead of 0.025 mm.

4. Page 13, Section 5.2.6. The specific analytical parameters and details of the laboratory techniques to be used for fish sample analysis should be incorporated into the report for EPA review and approval. It is unclear whether both filet and remains samples collected from an individual fish will be analyzed for contaminants or if only one of either the filet or remains samples will be analyzed. Depending on the specific organic contaminants to be selected as indicator compounds, additional tissue samples should be collected for analysis, including liver tissue samples for bioaccumulating compounds, and fatty tissue samples for lipophilic compounds. Please clarify.

5. Page 16, Section 5.5. Pesticide-grade isopropanol should be used as the solvent rinse for decontaminating all sampling equipment not made of plastic.

6. Page 19, Section 6.3. The list of organic parameters and analytical methods for the fish sampling portion of this study should be provided prior to approval of the sampling and analysis plan.

If you have any questions regarding PRC's review comments, please call me at (404) 522-2867.

Sincerely,

PRC Environmental Management, Inc.

Michael R. Jones
Regional Manager

cc: Andrew Johnson, PRC-McLean
Anthony Gardner, PRC-Dallas
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